

Geology 1 - Physical Geology Tu-Th 3:00-6:20

INSTRUCTOR

Douglas Given, U. S. Geological Survey @ Caltech
Office hours: Before and after class or call for appointment
PCC Office: Building E, room 210A (across the hall from classroom)
Caltech Office: 525 S. Wilson Ave., Pasadena (626) 583-7812
E-Mail: given@caltech.edu
Web Page URL: pasadena.wr.usgs.gov/office/given/geo1

COURSE PURPOSE

We will emphasize understanding the dynamic processes of the earth as we survey a broad range of topics related to physical geology. We will learn and apply the methodology, terminology, and techniques used by scientists. Lab work will give you hands-on experience with many aspects of mineralogy and geology. Concurrent enrollment in the field class, Geology 1F (field geology), is encouraged but not mandatory.

REQUIRED MATERIALS

Textbooks: **Earth Revealed: Physical Geology(6th Edition)** by McGeary, Plummer & Carlson, and **Geology Lab PDF files printed from Web Site**. Web access, hand-lens (buy from the department Lab Tech) and teal scan-trons (882-E) for exams. Various outside resources such as maps, atlases, etc. for exercises.

GRADING

Your final course grade will be based on the total points you earn on the work you turn in. Absence does not excuse you from completing assignments.

21%	150	Labs & exercises (in class and take-home)
14%	100	Quizzes (on-line & in class)
14%	100	Mid-term Exam
10%	70	Field Trip / Project
13%	90	Mineral Exam - open book, notes
21%	150	Final Exam (Cumulative)
6%	40	Class participation, attendance, etc.
100%	700	Total (90%=A, 80%=B, etc. adjusted by a curve)

Late assignments earn ½ credit if turned in within one week of the due date and zero thereafter. All lab materials are available outside of class time in room E210. Cheating will result in an “F” in the course. Under exceptional circumstances it may be possible to take an exam EARLY if arrangements are made IN ADVANCE.

Don’t count on extra credit.

Warning: Missing and late assignments are the most common cause of *poor grades* in this course.

EXPECTATIONS

Show up, be on time, stay to the end, do the work! Try to be interested and care about learning how the earth works, not just about getting a grade. Don’t bail at the break. If you are late, sink in quietly; don’t disrupt the class. Role will be taken every class session. The instructor can drop you from the class if you miss **six hours** of class time.

Please, turn pagers and cell phones off.

Expect to spend 4-6 hours/week outside of class on work for this course. Before each week begins you must read the chapter and e-mail the quiz. It is your responsibility to print each week’s lab and read the introduction.

Geology 1 Class Schedule -- Fall 2006 (D. Given)

Wk	Week of...	Lecture Topic	Lab	Chapter Reading/Quiz
1	Tue. Aug. 29	Introduction, Earth's origin	(<i>Geography Map</i>)	Skim Ch. 1, Read Ch. 2
	Thu. Aug. 31	Earth's Structure, Isostacy, etc.	1. Measurements	
2	Tue. Sep. 5	Sea Floor & Plate Tectonics	2. Hawaiian Hotspot	Ch. 3
	Thu. Sep. 7			
3	Tue. Sep. 12	Plate Tectonics	3. Topo maps	Ch. 4 & 5
	Thu. Sep. 14		<i>Tectonic map</i>	
4	Tue. Sep. 19	Seismology/earthquakes	4. Earthquake analysis	Ch. 7
	Thu. Sep. 21			
5	Tue. Sep. 26	Minerals - atoms, crystals	6. Intro. to minerals	Ch. 9
	Thu. Sep. 28			
6	Tue. Oct. 3	Igneous rocks and volcanoes	7. Igneous minerals	Ch. 10
	Thu. Oct. 5			
7	Tue. Oct. 10	Igneous rocks and volcanoes	5. Rock Cycle	Ch. 11
	Thu. Oct. 12			
8	Tue. Oct. 17	Volcanoes cont.	8. Igneous rocks	Ch. 12
	Thu. Oct. 19	Mid-term Exam		
9	Tue. Oct. 24	Weathering & Soils, Sedimentary rocks	10. Sedimentary min.	Ch. 14
	Thu. Oct. 26			
10	Tue. Oct. 31	Metamorphic rocks	11. Sedimentary rocks	Ch. 15
	Thu. Nov. 2			
11	Tue. Nov. 7	Structural Geology & Geologic time	12. Meta. min./rx	Ch. 6 & 8
	Thu. Nov. 9			
12	Tue. Nov. 14	Geologic Resources	13. Ore Minerals	Ch. 21
	Thu. Nov. 16			
13	Tue. Nov. 21	Mass wasting	Mineral Exam	Ch. 13
	Thu. Nov. 23	Thanksgiving		
14	Tue. Nov. 28	Streams & Rivers + Ground Water	15. Rivers & Erosion	Ch. 16 & 17
	Thu. Nov. 30			
	<i>Sat. Dec. 2</i>	<i>Field Trip</i>		
15	Tue. Dec. 5	Glaciers	14. Glaciers	Ch. 19
	Thu. Dec. 7			
16	Tue. Dec. 12	FINAL EXAM IS CUMULATIVE		
	Thu. Dec. 14	3:15-5:15 p.m.		
		<i>Schedule is subject to change</i>	Each chapter quiz is due before the week's lecture	